# **Patent Claims**

1. Active compound combinations, comprising at least one compound of the formula

5

$$H_3C$$
 $CH_3$ 
 $CH_3$ 

and

(1) a triazole derivative of the formula

10

$$X \longrightarrow O \longrightarrow CH - Y - C(CH_3)_3$$
 (II),

in which

X represents chlorine or phenyl and

15

(2) the triazole derivative of the formula

CI—CH<sub>2</sub>-CH<sub>2</sub>-C(CH<sub>3</sub>)<sub>3</sub>
(III),
$$\begin{array}{c}
CH_2\\
N\\
N
\end{array}$$
(tebuconazole)

and/or

5

(3) an aniline derivative of the formula

$$R^{1}$$
  $N < S - CCI_{2}F$  (IV),  $SO_{2} - N(CH_{3})_{2}$ 

in which

10

R<sup>1</sup> represents hydrogen or methyl,

and/or

15

(4) N-[1-(4-chloro-phenyl)-ethyl]-2,2-dichloro-1-ethyl-3-methyl-cyclopropane-carboxamide of the formula

$$CI \longrightarrow CH-NH-C \longrightarrow C_2H_5CH_3 \qquad (V)$$

$$CH_3 \qquad O \qquad C_2H_5CH_3$$

(carpropamid)

(5) the zinc propylene-1,2-bis-(dithiocarbamidate) of the formula

and/or

5

(6) at least one thiocarbamate of the formula

Me = Zn or Mn or a mixture of Zn and Mn

10

and/or

(7) the aniline derivative of the formula

15

and/or

(8) the compound of the formula

$$(CH_3)_2$$
  $CH-O-C-NH-CH-CH-CH_3$   $(IX)$   $CH_3$ 

20

(iprovalicarb)

and/or

(9) the benzothiadiazole derivative of the formula

5

(acibenzolar-S-methyl)

and/or

(10) the 8-t-butyl-2-(N-ethyl-N-n-propyl-amino)-methyl-1,4-dioxa-spiro[5,4]-decane of the formula

$$(CH_3)_3C$$
  $CH_2-N$   $C_2H_5$   $C_3H_7-n$   $(XI)$ 

(spiroxamine)

and/or

15

10

(11) the compound of the formula

### (12) the compound of the formula

$$CH_3$$
 $CF_3$ 
 $CH_3$ 
 $CH_3$ 
 $CF_3$ 
 $CH_3$ 
 $CH_3$ 
 $CF_3$ 
 $CH_3$ 
 $CF_3$ 
 $CH_3$ 
 $CO_{N}$ 
 $CH_3$ 
 $CO_{N}$ 
 $CO_{N}$ 

(trifloxystrobin)

5 and/or

### (13) the compound of the formula

10 and/or

### (14) the cyanoxime derivative of the formula

$$CH_3-CH_2-NH-C-NH-C-C=NOCH_3 \qquad (XV)$$
 (cymoxanil)

(15) a pyrimidine derivative of the formula

in which

5

R<sup>2</sup> represents methyl, —C≡C—CH<sub>3</sub> (mepanipyrim) or cyclopropyl (cyprodinyl),

10 and/or

(16) an aniline derivative of the formula

$$\begin{array}{c|c} CH_3 & CH_3 \\ \hline \\ -N & CH-COOCH_3 \\ \hline \\ C-CH_2O-CH_3 \\ \hline \\ CH_3 & O \end{array} \tag{XVII)}$$

(metalaxyl or metalaxyl M)

15 and/or

(17) the morpholine derivative of the formula

$$\begin{array}{c|c} O & & \\ \hline O & N-C-CH=C \\ \hline & & \\ \hline &$$

and/or

(18) the phthalimide derivative of the formula

and/or

5

10

15

(19) the phosphorus compound of the formula

$$\begin{bmatrix} H_5C_2O \\ H \end{bmatrix}_3 AI$$
 (fosetyl-AI)

and/or

(20) the hydroxyethyl-triazole derivative of the formula

$$CI \longrightarrow CH_2 \longrightarrow CI$$

$$CH_2 \longrightarrow CH_2$$

$$CH_2 \longrightarrow CH_2$$

$$N \longrightarrow N$$

$$N \longrightarrow S$$

$$N \longrightarrow N$$

$$N \longrightarrow S$$

the 1-[(6-chloro-3-pyridinyl)-methyl]-N-nitro-2-imidazolidinimine of the formula

- 5 and/or
  - (22) the oxazolidinedione of the formula

10 and/or

(23) the benzamide derivative of the formula

(zoxamide)

(24) the guanidine derivative of the formula

$$R^{3}$$
  $R^{3}$   $R^{3$ 

in which

m represents integers from 0 to 5 and

R<sup>3</sup> represents hydrogen (17 to 23%) or the radical of the formula

10

5

and/or

15 (25) the triazole derivative of the formula

### (26) the halogeno-benzimidazole of the formula

$$\begin{array}{c|c} F & & \\ &$$

and/or

5

# (27) the halogenopyrimidine of the formula

and/or

10

### (28) the tetrachloro-isophthalo-dinitrile of the formula

(chlorothalonil)

(29) the compound of the formula

$$H_3C$$
 $O$ 
 $N$ 
 $CH_3$ 
 $CH_3$ 
(propamocarb)

and/or

5 (30) the pyridineamine of the formula

$$CF_3$$
 $CI$ 
 $NO_2$ 
 $CF_3$ 
 $CI$ 
 $CF_3$ 
 $CF_3$ 
 $CF_3$ 
 $CXXXI)$ 
(fluazinam)

and/or

10 (31) the thiazolecarboxamide of the formula

and/or

15

(32) the sulphonamide of the formula

$$H_3C$$
 $N$ 
 $SO_2$ 
 $CI$ 
 $CH_3$ 
 $CI$ 
 $CH_3$ 

(cyamidazosulfamid)

and/or

5

# (33) the compound of the formula

and/or

10

### (34) the compound of the formula

(iprodione)

15

and/or

### (35) the compound of the formula

(procymidone)

and/or

5 (36) the diamide of the formula

(thiram)

10 and/or

(37) the methoxyacrylate derivative of the formula

15 (picoxystrobin)

and/or

(38) the quinoline derivative of the formula

and/or

(39) the phenylamide derivative of the formula

10 and/or

5

(40) the phenylamide derivative of the formula

$$CH_3$$
  $CH_3$   $CO$   $CH_3$   $CH$ 

15 (benalaxyl)

and/or

(41) the dicarboxime derivative of the formula

(captan)

and/or

(42) the phosphonic acid of the formula

(phosphonic acid)

10 and/or

5

(43) the pyrrole derivative of the formula

15 (fludioxonil)

and/or

(44) the phenyl carbonate of the formula

(diethofencarb)

and/or

5

(45) the copper compounds

a) copper oxychloride

(XXXXVIa)

b) copper hydroxid

(XXXXVIb)

10 and/or

(46) the imidazole derivative of the formula

15

(prochloraz)

### (47) the triazole derivative of the formula

a)

(difenconazole)

5 and/or

b)

(hexaconazole)

10 and/or

c)

(cyproconazole)

15

$$F \longrightarrow Si \longrightarrow N$$
 (XXXXVIIId)

(flusilazole)

(propiconazole)

5

and/or

e)

10

and/or

f)

15

(myclobutanil)

and/or

g)

5 (fenbuconazole)

and/or

h)

(tetraconazole)

10

and/or

15 (48) a compound of the general formula

in which

R<sup>1</sup> represents unsubstituted or fluorine-, chlorine-, bromine-, methyl- or ethyl-substituted phenyl, 2-naphthyl, 1,2,3,4-tetrahydronaphthyl or indanyl,

5

and/or

(49) N-methyl-2-(methoxyimino)-2-[2-([1-(3-tri-fluoro-methyl-phenyl)ethoxy]iminomethyl)phenyl]acetamide of the formula

10

$$CH_{3}NH \longrightarrow OCH_{3} \qquad (XXXXXX)$$

and/or

15

(50) 2,4-dihydro-5-methoxy-2-methyl-4-[2-([([1-(3-tri-fluoro-methylphenyl)ethylidene]amino)oxy]methyl)phenyl]-3H-1,2,4-triazol-3-one of the formula

20

(51) the compound of the formula

- 5
- 2. Active compound combinations according to Claim 1, comprising at least one compound of the formula (I) as defined in Claim 1 and
  - (3) an aniline derivative of the formula

10

$$H_3C$$
  $N < S$   $CCI_2F$   $SO_2$   $N(CH_3)_2$  (IVb)

and/or

(5) the zinc propylene-1,2-bis-(dithiocarbamidate) of the formula

15

(6) at least one thiocarbamate of the formula

Me = mixture of Zn and Mn

5

and/or

(7) the aniline derivative of the formula

10

and/or

(8) the compound of the formula

$$(CH_3)_2CH-O-C-NH-CH-CH-CH-CH_3$$
(iprovalicarb)

15

## (11) the compound of the formula

and/or

5

### (12) the compound of the formula

$$CH_3$$
  $CF_3$   $CH_3$   $CH_3$   $CF_3$   $CH_3$   $CH_3$ 

10 and/or

## (13) the compound of the formula

$$\begin{array}{c|c}
CI \\
\hline
\\
N-O \\
\hline
\\
N-O \\
\hline
\\
N-O \\
\hline
\\

N-O \\

N-O \\
\hline

N-O \\

N-O \\$$

15

(18) the phthalimide derivative of the formula

and/or

5

(20) the hydroxyethyl-triazole derivative of the formula

$$CI \longrightarrow CH_{2} \longrightarrow CI$$

$$CH_{2} \longrightarrow CH_{2}$$

$$CH_{2} \longrightarrow S$$

$$N \longrightarrow S$$

$$N \longrightarrow S$$

and/or

10

(26) the halogeno-benzimidazole of the formula

$$\begin{array}{c|c} F & & \\ &$$

and/or

15

(27) the halogenopyrimidine of the formula

and/or

5

(28) the tetrachloro-isophthalo-dinitrile of the formula

(chlorothalonil)

and/or

10

(30) the pyridinamine of the formula

$$CF_3$$
 $CI$ 
 $NO_2$ 
 $CI$ 
 $O_2N$ 
 $CF_3$ 
 $CI$ 
 $CI$ 
 $CI$ 
 $CI$ 
 $CI$ 
 $CF_3$ 
 $CI$ 
 $CI$ 
 $CF_3$ 
 $CF_3$ 
 $CXXXI)$ 

(45) the copper compounds

a) copper oxychloride

(XXXXVIa)

b) copper hydroxide

(XXXXVIb).

- 5 3. Composition according to Claim 1, characterized in that in the active compound combinations the weight ratio of active compound of the formula (I) to
  - active compound of group (1) is from 1:0.1 to 1:50,
- active compound of group (2) is from 1:0.1 to 1:50,
  - active compound of group (3) is from 1:1 to 1:150,
  - active compound of group (4) is from 1:0.1 to 1:10,
  - active compound of group (5) is from 1:1 to 1:150,
  - active compound of group (6) is from 1:1 to 1:150,
- active compound of group (7) is from 1:0.1 to 1:50,
  - active compound of group (8) is from 1:0.1 to 1:50,
  - active compound of group (9) is from 1:0.02 to 1:50,
  - active compound of group (10) is from 1:0.1 to 1:50,
  - active compound of group (11) is from 1:0.1 to 1:50,
  - active compound of group (12) is from 1:0.1 to 1:50,
    - active compound of group (13) is from 1:0.1 to 1:50,
    - active compound of group (14) is from 1:0.1 to 1:50,
    - active compound of group (15) is from 1:0.2 to 1:50,
    - active compound of group (16) is from 1:0.1 to 1:50,
    - active compound of group (17) is from 1:0.1 to 1:50,
      - active compound of group (18) is from 1:1 to 1:150,
      - active compound of group (19) is from 1:0.1 to 1:150,
      - active compound of group (20) is from 1:0.02 to 1:50,
      - active compound of group (21) is from 1:0.05 to 1:20,
- active compound of group (22) is from 1:0.1 to 1:50,
  - active compound of group (23) is from 1:0.1 to 1:50,

15

20

25

- active compound of group (24) is from 1:0.1 to 1:150, - active compound of group (25) is from 1:0.1 to 1:50, - active compound of group (26) is from 1:0.1 to 1:50, - active compound of group (27) is from 1:0.1 to 1:50, 5 - active compound of group (28) is from 1:1 to 1:150, - active compound of group (29) is from 1:1 to 1:150, - active compound of group (30) is from 1:0.1 to 1:50, - active compound of group (31) is from 1:0.1 to 1:50, - active compound of group (32) is from 1:0.1 to 1:50, 10 - active compound of group (33) is from 1:0.1 to 1:50, - active compound of group (34) is from 1:0.1 to 1:50, - active compound of group (35) is from 1:1 to 1:50, - active compound of group (36) is from 1:1 to 1:150, - active compound of group (37) is from 1:0.1 to 1:50, 15 - active compound of group (38) is from 1:0.1 to 1:50, - active compound of group (39) is from 1:0.1 to 1:50, - active compound of group (40) is from 1:0.1 to 1:50, - active compound of group (41) is from 1:1 to 1:150, - active compound of group (42) is from 1:1 to 1:150, - active compound of group (43) is from 1:0.1 to 1:50, 20 - active compound of group (44) is from 1:0.1 to 1:50, - active compound of group (45a) is from 1:1 to 1:150, - active compound of group (45b) is from 1:1 to 1:150, - active compound of group (46) is from 1:0.1 to 1:50, - active compound of group (47a) is from 1:0.1 to 1:50, 25 - active compound of group (47b) is from 1:0,1 to 1:50, - active compound of group (47c) is from 1:0.1 to 1:50, - active compound of group (47d) is from 1:0.1 to 1:50, - active compound of group (47e) is from 1:0.1 to 1:50, 30 - active compound of group (47f) is from 1:0.1 to 1:50, - active compound of group (47g) is from 1:0.1 to 1:50,

- active compound of group (47h) is from 1:0.1 to 1:50,
- active compound of group (48) is from 1:0.1 to 1:50,
- active compound of group (49) is from 1:0.1 to 1:50,
- active compound of group (50) is from 1:0.1 to 1:50,
- active compound of group (51) is from 1:0.1 to 1:50.
  - 4. Method for controlling fungi, characterized in that active compound combinations according to at least one of Claims 1 to 3 are applied to the fungi and/or their habitat.

10

5

- 5. Use of active compound combinations according to any of Claims 1 to 3 for controlling fungi.
- 6. Process for preparing fungicidal compositions, characterized in that active compound combinations according to any of Claims 1 to 3 are mixed with extenders and/or surfactants.